

Hydrology & Human Affairs

GLY 3882C

Course Description & Goals

Water is a resource that is vital for life, but the quality and quantity of our water resources are currently under threat. This course introduces the basic concepts of groundwater flow, its relationship to surface water, humans, and the environment, and applies those concepts to current water-related issues. By the end of this course, you should be able to:

- Describe the basic concepts of groundwater flow and its relationship to surface water, humans, and the environment.
- Apply hydrologic methods, including potentiometric surface mapping, cross-section development, and data analysis, to assess water-related problems.
- Summarize, present, and discuss hydrologic information from scientific reports and the media.

Class Format

The class is an online asynchronous course, meaning no required course activities will be conducted “live”. Optional office hours and help sessions will be offered in real time. The course consists of 10 modules completed in sequence. See Class Schedule for details.

Technology

You will need a dependable computer and internet connection to access the class content on Canvas, and a functional webcam to show the proctor a photo ID before taking exams.

Textbook:

No Required Textbook. Each module provides the required reading material or will link to resources freely available online.



Contact Info

Dr. Anita Marshall (she/her)

Email: anita.marshall@ufl.edu, or message through Canvas.

Office Phone: See Canvas

Office Location:
Williamson Hall 255

Office Hours:

Mon 11 am – noon (office + Zoom)
Tues 2-3 pm (Zoom only).

See Canvas for Zoom link.

Teaching Assistant

Maggie Brosky (she/her)

Email: m.brosky@ufl.edu or message through Canvas.

Office Hours:

Tues 1-3 pm

See Canvas for link.

Important Dates

Exam 1 & Synthesis 1: 9/27 – 10/4

Project Presentation Due: 11/15

Synthesis Report 2: 11/22

Exam 2 Window: 11/29 – 12/6

Course format and Prerequisites:

GLY 3882C is a 3000-level class, which means it is aimed at junior-level students or above. This course fulfills the UF General Education Physical Science (P) requirement, and is an [International Scholars Program](#) course (click here to find out more about ISP). Technically there are no prerequisites, but you will struggle without basic math (specifically algebra) skills.

YOUR COURSE RESPONSIBILITIES

- Check the announcements and your e-mail regularly - it is the only way I can directly communicate with you in an online course.
- Complete course activities in a timely fashion.
- Abide by UF's [Academic Honor Code](#). On all work submitted for credit by students at the University of Florida, the following pledge is either required or implied: "On my honor, I have neither given nor received unauthorized aid in doing this assignment." See Behavior Expectations for more details.
- Respect your fellow class members and follow "[Netiquette](#)" [Guidelines](#) for online communication.

COURSE ACTIVITIES

Modules: Each module contains assigned readings and videos to introduce concepts and activities to help you engage with the material. Within each module:

- **Assignments** will introduce material about specific areas and/or provide practice with new concepts and skills. Assignment types vary and will include essays, data analysis, and small presentations. Your lowest assignment grade automatically drops, even if it is a zero/missing.
- **Discussions** provide a place to consider the implications of the material, and related real-world issues. The written posts and replies will be evaluated on how well they address the question or assignment and the quality of communication. Every other week we will start a new discussion. The lowest discussion grade drops.
- **Quizzes** for each module will review the terms and concepts from the reading and ask you to synthesize information from the assignment. The quizzes will generally be a combination of True/False, multiple choice, multiple-answer or "fill in the blank" questions. The 15-point module quiz will include questions from the reading and assignment. Your lowest quiz grade automatically drops.

Assessments: In addition to weekly Module activities there are presentations, exams and reports to assess your learning. Detailed info is on the class website, but to summarize:

- A **presentation** with a topic based on student interests and recent news.
- Two **Exams** (online, multiple choice or fill-in-the-blank, notes allowed). Exams are proctored through Honorlock. You will not be recorded taking you exam, but you will need your webcam to show a photo ID to the proctor before you begin.
- Two **Synthesis Reports** will ask you to combine class material, discussions and/or presentations and apply skills and/or concepts to a new situation.

ASSIGNMENT EXPECTATIONS

When working on assignments, please follow these guidelines:

- Collaboration with other students is permitted and encouraged, but you are ultimately responsible for turning in your own work. Plagiarism of other student's work or published materials is not allowed. Assignments and Synthesis Reports will be evaluated with Turnitin, an online service that identifies potential plagiarism by comparing your submission to online material, submissions from prior semesters, and submissions from current classmates. Submissions flagged by Turnitin will be evaluated for a potential honor code violation. You won't have any issues if you do your own work in your own words!
- You can reference material or ideas from other people. Just give credit where due and cite your sources. I'm not a stickler for which format to use for citations, as long as you are consistent and use the same format throughout an assignment.

GRADES

There are a total of 520 points possible in the course:

- 105 pts: Best 6 of 7 Assignments @ 15 points each
- 100 pts: Best 10 of 11 Quizzes, 10 pts each; 5 pts Syllabus Quiz
- 85 pts: Best 4 of 5 Discussions, 20 points each; 5 points introduction post.
- 40 pts: Online Presentation
- 80 pts: Two Exams @ 40 points each
- 40 pts: Two Synthesis Reports @ 20 pts each

Extra Credit: Approximately 5-10 extra credit points will be available to all students at various times during the semester. Please don't request individual extra credit.

Final Grades: See <https://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx> for UF grading policies. Final grades will be assigned with the following criteria:

Total Points	% Grade	Letter Grade	GPA Value
366 +	90-100	A	4.0
345 - 365.9	85-89.9	B+	3.5
325 - 344.9	80-84.9	B	3.0
305 - 324.9	75-79.9	C+	2.5
284 - 304.9	70-74.9	C	2.0
264 - 283.9	65-69.9	D+	1.5
244 - 293.9	59-64.9	D	1
<243.9	< 58.9	E	0

Late Policy & Missed Work: Assignments, Quizzes and Section Reviews have a one-week grace period with no penalty. Exams and Discussions will not be accepted late without permission.

Religious Observances, Military Duty & other Unavoidable Absences: Students who anticipate the necessity of missing deadlines due to religious observances must provide notice of the dates to the instructor, in writing (email is fine) at least one week in

advance of the missed class days so accommodations to be made. For other unavoidable absences, contact me as soon as you know the dates. Please do not wait until after you have missed assignments to ask for an exception, as I may not be able to help - especially near the end of the semester.

COURSE SCHEDULE

Modules *open at noon and prior modules close at midnight (EST) on Tuesday* of each week. Trying to complete everything in a module on the day it is due is not a good plan. It is best to develop a personal routine to make sure everything in the module is completed by the deadline.

Introduction - course opens	8/22
Module 1 Rainfall and Recharge: Why isn't rainfall enough? examines why we can't rely on rainfall alone for our water needs.	8/24 – 8/30
Module 2 Water Underground introduces how water is stored and flows underground and the relationship between geologic materials and water flow and storage.	8/30 – 9/6
Module 3 Mapping Flow outlines how wells are installed and how water levels in wells can be mapped to understand groundwater flow.	9/6 – 9/13
Module 4 Streams and Floods covers how stream flow is measured, what factors affect the stream discharge, floods, and dams. Students examine surface water conflicts.	9/13 – 9/20
Module 5 Surface Water and Groundwater examines the complex interaction between groundwater and surface water.	9/20 – 9/27
Synthesis 1 Exam 1	9/27 – 10/4
Module 6 Darcy's Law: How Slow Does Groundwater Flow? covers how groundwater flow rates are determined and how groundwater can be "dated" using isotopes.	10/4 – 10/11
Module 7 Pumping and Groundwater Budgets examines how an aquifer's inflows and outflows are impacted by pumping and the impacts of pumping on the land surface.	10/11 – 10/18
Module 8 Water Management uses U.S. law to introduce differing strategies for water allocation and consider the problems of sharing water between states and nations	10/18 – 10/25
Module 9 Water Chemistry and Karst describes the reactions that affect the chemistry of surface water and groundwater and examines karst and sinkholes.	10/25 – 11/1
Module 10 Water Quality focuses on nutrients, natural contaminants, and saltwater intrusion.	11/1 – 11/8
Final presentation revisions. Presentations due 11/15	11/8 – 11/15

Synthesis 2	11/15 – 11/22
Thanksgiving Break – no new modules or assignments	11/22 – 11/29
Exam 2	11/29 – 12/6

ACCESSIBILITY, INCLUSION & RESPECT

Respect & Inclusion: In this classroom (physical or virtual), everyone should feel welcome to share their thoughts in a respectful way. Treat your classmates the way you would like to be treated. You deserve to be called by the name and pronouns you prefer. UF has not enabled the feature that lets users to specify pronouns in Canvas, so please correct me if I write or say your pronouns incorrectly! And feel free to share this info in your introductory post. If something in the course material, instruction or class interactions make you feel excluded or uncomfortable, please let me know so I can address it. See the Netiquette section under “UF Policies” for more details on how to interact respectfully online.

UF Statement on Accommodating Students with Disabilities: Students with disabilities who experience learning barriers and would like to request academic accommodations should connect with the disability Resource Center. Click here to get started with the Disability Resource Center: <https://disability.ufl.edu/get-started/>. It is important for students to share their accommodation letter with their instructor and discuss their access needs, as early as possible in the semester.

My Personal Statement on Accessibility: We all learn differently. You don't have to have a formally recognized disability to find yourself having difficulty with some aspect of the college learning environment. I take accessibility seriously, so please let me know if something in the course material presents a barrier to your full participation in the course so we can work together to find a reasonable solution – *even if you don't have, or don't yet have, a formal accommodation letter*. And please contact me during the semester if your accommodation needs change.

NEED HELP?

Help with course material: GLY 3882C is a 3000-level class, which means it is aimed at junior-level students or above. You may be challenged by some parts of the material, so be sure to ask questions as you work through the assignments and as you prepare for the quizzes and syntheses. Post general questions on the class discussion board so we can answer them for everyone. The discussion board is often a quick way to get an answer, as your fellow class members can also contribute answers. You can also contact the teaching assistant or the professor for help when you need it.

Office hours are hosted on Zoom with live captioning available. Please let us know if you have other access needs. Office hours are for your benefit - ask questions, get assignment help, discuss class topics or geoscience degrees and careers, or just say hello. If you can't make it to scheduled office hours, you can arrange an appointment for another time. *The TA handles Assignment grading, so they are the best point of contact for Assignment help.*

Technical Support: For issues with technical difficulties for E-learning, please contact the UF Help Desk: <http://helpdesk.ufl.edu> or (352) 392-4357. If you miss a deadline due

to technical issues, requests for extensions or make-up activities should be accompanied by the ticket number from The Help Desk. The ticket number will document the time and date of the problem. Please let us know asap if you have technical problems when submitting assignments.

Mental Health and well-being: Sometimes being a college student can take a toll on your mental health. If you are mentally or emotionally struggling for any reason, you can contact the [Counseling and Wellness Center](#). They have one-click access to people who can help you connect to the right resources for your situation. If these struggles are negatively impacting your performance your courses, I encourage you to contact the [Dean of Students Care Area](#) to connect with a support team that can help with temporary accommodations, authorization to make up missing course work, etc. Additionally, if you are comfortable doing so, please reach out to me and I will provide any accommodations in this course that I can.

Food Pantry: The Field and Fork Pantry is a resource on the University of Florida campus committed to supporting anyone in the UF community experiencing food insecurity. <https://pantry.fieldandfork.ufl.edu/>

Financial Assistance: UF's [Aid-A-Gator](#) program has small grants available to help students with unexpected financial needs.

Other Resources: Didn't see the kind of help you were looking for listed here? Links to a variety of support resources for online students are consolidated on this page: <http://www.distance.ufl.edu/getting-help>

STUDENT FEEDBACK & COURSE EVALUATION

Students are expected to provide professional and respectful feedback on the quality of instruction in this course by completing course evaluations online via GatorEvals. Guidance on how to give feedback in a professional and respectful manner is available at <https://gatorevals.aa.ufl.edu/students/>. Students will be notified when the evaluation period opens and can complete evaluations through the email they receive from GatorEvals, in their Canvas course menu under GatorEvals, or via <https://ufl.bluera.com/ufl/>. Summaries of course evaluation results are available to students at <https://gatorevals.aa.ufl.edu/public-results/>.

UF POLICIES

University Policy on Academic Misconduct: Academic honesty and integrity are fundamental values of the University community. Students should be sure that they understand the UF Student Conduct Code: <https://sccr.dso.ufl.edu/policies/student-honor-code-student-conduct-code/>, which includes the Honor Pledge.

UF Undergraduate Student Handbook: The student handbook has all the details on UF policies for students. <https://dso.ufl.edu/resources/student-handbook/>

That was a lot of info - thanks for reading all the way to the end!